MINOR SOURCE OPERATING PERMIT
(MSOP)

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

and

HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Purdue University Calumet
2200 169th Street
Hammond, Indiana 46323-2094

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: **MSOP 089-11480-00249**	
Issued by: _____ Ronald L. Novak, Director Hammond Department of Environmental Management Air Pollution Control Division	Issuance Date: August 1, 2001 Expiration Date: December 31, 2001

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM)-Office of Air Quality (OAQ) and the Hammond Department of Environmental Management (HDEM). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates steam boilers used for heating the university.

Authorized Individual:	Steve Gyure, Director of Maintenance, Operations & Utilities
Source Address:	2200 169th Street, Hammond, Indiana 46323-2094
Mailing Address:	2200 169th Street, Hammond, Indiana 46323-2094
Phone Number:	(219)989-2973
SIC Code:	8221 – Educational Services
County Location:	Lake County
County Status:	Attainment/Unclassifiable for CO and NO_2, Attainment for Pb, Primary Nonattainment for SO2, Moderate Nonattainment for PM10, and Severe Nonattainment for VOC and NOx (Ozone).
Source Status:	Minor Source Operating Permit Minor Source under PSD Rules Major Source under Emission Offset Rules

A.2 Emissions units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

Seven (7) Boilers

(a) One (1) B & W Boiler (Central Plant), identified as #1E, with a maximum design capacity of 25.2 MMBtu/hr heat input, natural gas-fired, constructed prior to 1967, using no control equipment and exhausting at one (1) stack, identified as S-1.

(b) One (1) Burnham Boiler (Central Plant), identified as #1F, with a maximum design capacity of 3.8 MMBtu/hr heat input, primarily natural gas-fired with No. 2 Fuel Oil as a stand-by, constructed in 1997, using no control equipment and exhausting at one (1) stack, identified as S-3.

(c) Three (3) Burnham Boilers (Central Plant), identified as #2F, #3F, and #4F, each with a maximum design capacity of 6.3 MMBtu/hr heat input, primarily natural gas-fired with No. 2 Fuel Oil as a stand-by, constructed in 1997, using no control equipment and exhausting at two (2) stacks, identified as S-3 (#2F) and S-2 (#3F & #4F).

(d) Two (2) Highlander Boilers (K-Bldg.), identified as #1 and #2, each with a maximum design capacity of 5.6 MMBtu/hr heat input, natural gas-fired, constructed prior to 1967, using no control equipment and exhausting at two (2) stacks, identified as S-4 and S-5, respectively.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is not required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

(a) It is not an affected source under Title IV (Acid Deposition Control) of the Clean Air Act, as defined in 326 IAC 2-7-1(3);

(b) It is a major source, as defined in 326 IAC 2-7-1(22);

(c) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

Purdue University Calumet is considered a major source for Nitrogen Oxides (NOx) (>25 TPY, Lake & Porter Counties), however, the source is currently exempt from the requirements of the Title V Operation Permits program due to the NOx requirement waiver (Section 182(f) of the Clean Air Act) which increased the major stationary source threshold level for Nitrogen Oxides NOx in severe ozone nonattainment areas (Lake and Porter) as defined in 326 IAC 2-7-1(22)(C)(i)(CC) from 25 tons per year to 100 tons per year.

SECTION B GENERAL OPERATION CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to operate does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Modification to Permit [326 IAC 2]

All requirements and conditions of this operation permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of operation permits pursuant to 326 IAC 2 (Permit Review Rules).

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

C.1 PSD Minor Source Status [326 IAC 2-2] [40 CFR 52.21]

(a) The total source potential to emit of CO and NOx (as itself, not as an ozone precursor) is less than 250 tons per year. Therefore the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 will not apply.

(b) Any change or modification which may increase potential to emit of CO or NOx to 250 tons per year from this source, shall cause this source to be considered a major source under PSD, 326 IAC 2-2 and 40 CFR 52.21, and shall require approval from IDEM-OAQ and HDEM prior to making the change.

C.2 Emission Offset Major Source Status [326 IAC 2-3]

(a) The total source potential to emit of NOx (as a precursor to ozone) is greater than 25 tons per year. Therefore, the requirements of 326 IAC 2-3 (Emission Offset) may apply.

(b) Any increase in actual emissions from a particular physical change or change in the method of operation along with any increase or decrease in actual emissions accumulated on a pollutant specific basis over the past five years resulting in a significant net emissions increase or the potential of a source to emit NOx at a rate of 25 tons per year or greater, shall subject the source to the requirements of Emission Offset pursuant to 326 IAC 2-3, before such change may occur.

(c) Any change or modification which may increase potential to emit of VOC to 25 tons per year, 10 tons per year of any single hazardous air pollutant, 25 tons per year of any combination of hazardous air pollutants, or 100 tons per year of any other regulated pollutant from this source, shall cause this source to be considered a major source under Part 70 Permit Program, 326 IAC 2-7, and shall require approval from IDEM-OAQ and HDEM prior to making the change.

C.3 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) after issuance of this permit, including the following information on each emissions unit:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

(b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) PMP's shall be submitted to IDEM-OAQ and HDEM upon request and shall be subject to review and approval by IDEM-OAQ and HDEM. IDEM-OAQ and HDEM may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.4 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

Hammond Department of Environmental Management
5925 Calumet Avenue – Room 304
Hammond, Indiana 46320

Any such application should be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1.

(c) The Permittee shall notify the OAQ and HDEM within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

C.5 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM-OAQ, HDEM, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;

(c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

C.6 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

(a) In the event that ownership of this source is changed, the Permittee shall notify IDEM-OAQ, Permits Branch and HDEM, within thirty (30) days of the change.

(b) The written notification shall be sufficient to transfer the permit to the new owner by a notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).

(c) IDEM-OAQ and HDEM shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

C.7 Permit Revocation [326 IAC 2-1-9]

Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM and HDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.8 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of twenty percent (20%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.9 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

C.10 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2. 326 IAC 9-1-2 is not federally enforceable.

C.11 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

C.12 Fugitive Dust Emissions [326 IAC 6-1-11.1]

The Permittee shall be in violation of 326 IAC 6-1-11.1 (Lake County Fugitive Particulate Matter Control Requirements), if the opacity of fugitive particulate emissions exceeds ten percent (10%).

Testing Requirements

C.13 Performance Testing [326 IAC 3-6]

(a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM-OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Hammond Department of Environmental Management
5925 Calumet Avenue – Room 304
Hammond, Indiana 46320

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above addresses so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM-OAQ and HDEM within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM-OAQ and HDEM, if the source submits to IDEM-OAQ and HDEM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

Compliance Monitoring Requirements

C.14 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.15 Monitoring Methods [326 IAC 3]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, or other approved methods as specified in this permit.

C.16 Actions Related to Noncompliance Demonstrated by a Stack Test

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM-OAQ and HDEM, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected emissions unit while the corrective actions are being implemented. IDEM-OAQ or HDEM shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM-OAQ and HDEM within thirty (30) days of receipt of the notice of deficiency. IDEM-OAQ and HDEM reserves the authority to use enforcement activities to resolve noncompliant stack tests.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM-OAQ and HDEM that retesting in one-hundred and twenty (120) days is not practicable, IDEM-OAQ and HDEM may extend the retesting deadline. Failure of the second test to demonstrate compliance with the appropriate permit conditions may be grounds for immediate revocation of the permit to operate the affected emissions unit.

The documents submitted pursuant to this condition do not require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

Record Keeping and Reporting Requirements

C.17 Malfunctions Report [326 IAC 1-6-2]
Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM)-Office of Air Quality (OAQ), the Hammond Department of Environmental Management (HDEM) or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ and HDEM, using the Malfunction Report Forms (2 pages) included in this permit. Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

IDEM-OAQ
Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

HDEM
Telephone Number: 219-853-6306
Facsimile Number: 219-853-6343

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.18 Annual Emission Statement [326 IAC 2-6]

(a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:

(1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);

(b) The annual emission statement covers the twelve (12) consecutive month time period starting December 1 and ending November 30. The annual emission statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Hammond Department of Environmental Management
5925 Calumet Avenue – Room 304
Hammond, Indiana 46320

(c) The annual emission statement required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM-OAQ and HDEM on or before the date it is due.

The submittal by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

C.19 Monitoring Data Availability [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) With the exception of performance tests conducted in accordance with Section C-Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions.

(b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this permit is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this permit.

(c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.

(d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.

(e) At its discretion, IDEM and HDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any quarter.

(f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.20 General Record Keeping Requirements [326 IAC 2-6.1-2]

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years and available upon the request of an IDEM-OAQ or HDEM representative. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner or HDEM makes a written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner or HDEM within a reasonable time.

(b) Records of required monitoring information shall include, where applicable:

(1) The date, place, and time of sampling or measurements;

(2) The dates analyses were performed;

(3) The company or entity performing the analyses;

(4) The analytic techniques or methods used;

(5) The results of such analyses; and

(6) The operating conditions existing at the time of sampling or measurement.

(c) Support information shall include, where applicable:

(1) Copies of all reports required by this permit;

(2) All original strip chart recordings for continuous monitoring instrumentation;

(3) All calibration and maintenance records;

(4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this permit, and whether a deviation from a permit condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.

(d) All record keeping requirements not already legally required shall be implemented when operation begins.

C.21 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

(a) Any reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Hammond Department of Environmental Management
5925 Calumet Avenue – Room 304
Hammond, Indiana 46320

(b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM-OAQ and HDEM on or before the date it is due.

(c) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

C.22 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) Annual notification shall be submitted to the Office of Air Quality and HDEM stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.

(c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Data Section, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

and

Hammond Department of Environmental Management
5925 Calumet Avenue – Room 304
Hammond, Indiana 46320

(d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM-OAQ and HDEM on or before the date it is due.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description
(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Seven (7) Boilers

(a) One (1) B & W Boiler (Central Plant), identified as #1E, with a maximum design capacity of 25.2 MMBtu/hr heat input, natural gas-fired, constructed prior to 1967, using no control equipment and exhausting at one (1) stack, identified as S-1.

(b) One (1) Burnham Boiler (Central Plant), identified as #1F, with a maximum design capacity of 3.8 MMBtu/hr heat input, primarily natural gas-fired with No. 2 Fuel Oil as a stand-by, constructed in 1997, using no control equipment and exhausting at one (1) stack, identified as S-3.

(c) Three (3) Burnham Boilers (Central Plant), identified as #2F, #3F, and #4F, each with a maximum design capacity of 6.3 MMBtu/hr heat input, primarily natural gas-fired with No. 2 Fuel Oil as a stand-by, constructed in 1997, using no control equipment and exhausting at two (2) stacks, identified as S-3 (#2F) and S-2 (#3F & #4F).

(d) Two (2) Highlander Boilers (K-Bldg.), identified as #1 and #2, each with a maximum design capacity of 5.6 MMBtu/hr heat input, natural gas-fired, constructed prior to 1967, using no control equipment and exhausting at two (2) stacks, identified as S-4 and S-5, respectively.

Emission Limitations and Standards

D.1.1 Particulate Matter Limitation (PM) [326 IAC 6-2-2]

Pursuant to 326 IAC 6-2-2 (a) (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(b)), particulate emissions from each facility used for indirect heating purposes which were existing and in operation on or before June 8, 1972, shall in no case exceed the pound of particulate matter per million British thermal units heat input, as shown in the following table:

Boiler	Installation Date	Heat Input Rating (mmBtu/hr)	Emissions Limitation (lb/mmBtu)
B & W Boiler (Central Plant)	Prior to 1967	25.2	0.4895
#1 Highlander Boiler	Prior to 1967	5.6	0.4895
#2 Highlander Boiler	Prior to 1967	5.6	0.4895

This emission limitation was based on the following equation:

$$Pt = 0.87 / Q^{0.16}$$

Where:

Pt = Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input.

Q = Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

= 36.4 mmBtu/hr

D.1.2 Particulate Matter Limitation (PM) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (a) (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(d)), particulate emissions from each facility used for indirect heating purposes which were existing and in operation after September 21, 1983, shall in no case exceed the pound of particulate matter per million British thermal units heat input, as shown in the following table:

Boiler	Installation Date	Heat Input Rating (mmBtu/hr)	Emissions Limitation (lb/mmBtu)
#1F Burnham Boiler (Central Plant)	1997	3.8	0.3774
#2F Burnham Boiler (Central Plant)	1997	6.3	0.3774
#3F Burnham Boiler (Central Plant)	1997	6.3	0.3774
#4F Burnham Boiler (Central Plant)	1997	6.3	0.3774

The emission limitation was based on the following equation:

$$Pt = 1.09 / Q^{0.26}$$

Where:

Pt = Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input.

Q = Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

= 59.1 mmBtu/hr

D.1.3 Particulate Matter Limitation (PM) [Hammond Air Quality Control Ordinance No. 3522]
Particulate matter emissions from the combustion of natural gas and No. 2 fuel oil will be governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended). As shown in the table below the local emission limitation will be more stringent than that using 326 IAC 6-2 Particulate Emission Limitations for Sources of Indirect Heating.

Boiler	Local Limit (lbs/hr)	Local Limit (TPY)
B & W Boiler (Central Plant)	0.1878	0.8224
#1 Highlander Boiler	0.0417	0.1828
#2 Highlander Boiler	0.0417	0.1828
#1F Burnham Boiler (Central Plant)	0.0551	0.2412
#2F Burnham Boiler (Central Plant)	0.0913	0.3999
#3F Burnham Boiler (Central Plant)	0.0913	0.3999
#4F Burnham Boiler (Central Plant)	0.0913	0.3999

D.1.4 Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO)

Emissions from the combustion of natural gas and No. 2 fuel oil are governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended) for the following pollutants: Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO).

Pollutant	Local Limit (lbs/hr)	Local Limit (TPY)
SO2	12.337	54.036
NOx	5.794	25.378
VOC	0.319	1.396
CO	4.867	21.318

D.1.5 Sulfur Dioxide (SO2) [Hammond Air Quality Control Ordinance No. 3522]

Pursuant to the Hammond Air Quality Control Ordinance No. 3522 (as amended), the sulfur content by weight of the fuel oil burned shall not exceed a maximum of 0.5%.

D.1.6 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for these emissions units and any control device(s).

Compliance Determination Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.7 Testing Requirements [326 IAC 2-1.1-11]

The Permittee is not required to test this emissions unit by this permit. However, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance. If testing is required by IDEM or HDEM, compliance shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.1.8 Sulfur Dioxide Emissions and Sulfur Content

Compliance with Condition D.1.5 shall be determined utilizing one of the following options.

(a) Pursuant to 326 IAC 3-7-4, the Permittee shall demonstrate that the fuel oil sulfur content does not exceed five-tenths percent (0.5%) by weight by:

(1) Providing vendor analysis of fuel delivered, if accompanied by a certification; or

(2) Analyzing the oil sample to determine the sulfur content of the oil via the procedures in 40 CFR 60, Appendix A, Method 19.

(A) Oil samples may be collected from the fuel tank immediately after the fuel tank is filled and before any oil is combusted; and

(B) If a partially empty fuel tank is refilled, a new sample and analysis would be required upon filling; or

(b) Compliance may also be determined by conducting a stack test for sulfur dioxide emissions from the four (4) Burnham Boilers, using 40 CFR 60, Appendix A, Method 6 in accordance with the procedures in 326 IAC 3-6.

A determination of noncompliance pursuant to either of the methods specified in (a) or (b) above shall not be refuted by evidence of compliance pursuant to the other method.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.9 Visible Emissions Notations

(a) Once per shift visible emission notations of each of the four (4) Burnham Boilers' stack exhaust shall be performed during normal daylight operations while combusting No. 2 fuel oil. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.10 Record Keeping Requirements

(a) To document compliance with Conditions D.1.1 through D.1.4, the Permittee shall maintain monthly records of the following information for each of the Seven (7) Boilers:

(1) Number of hours of operation for each of the Seven (7) Boilers;

(2) Cubic feet of gaseous fuel fired; and

(3) Gallons of liquid fuel fired.

(b) To document compliance with Conditions D.1.4 and D.1.5 the Permittee shall maintain records in accordance with (1) through (6) below.

(1) Calendar dates covered in the compliance determination period;

(2) Actual fuel oil usage since last compliance determination period and equivalent sulfur dioxide emissions;

(3) A certification, signed by the owner or operator, that the records of the fuel supplier certifications represent all of the fuel combusted during the period; and

If the fuel supplier certification is used to demonstrate compliance the following, as a minimum, shall be maintained:

(4) Fuel supplier certifications;

(5) The name of the fuel supplier; and

(6) A statement from the fuel supplier that certifies the sulfur content of the fuel oil.

The Permittee shall retain records of all recording/monitoring data and support information for a period of five (5) years, or longer if specified elsewhere in this permit, from the date of the monitoring sample, measurement, or report. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit.

(c) To document compliance with Condition D.1.9, the Permittee shall maintain records of once per shift visible emission notations of the four (4) Burnham Boilers' stack exhaust while combusting No. 2 fuel oil.

(d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.11 Reporting Requirements

(a) A summary of the information to document compliance with Condition D.1.10 shall be submitted to the address(es) listed in Section C – General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, upon request.

(b) The permittee shall certify, on the Natural Gas Fired Boiler Certification form provided, that natural gas was fired in the boiler at all times during each quarter. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The natural gas boiler certification shall be submitted to the address listed in Section C – General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and
HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
PART 70 OPERATING PERMIT

NATURAL GAS FIRED BOILER CERTIFICATION

Source Name: **Purdue University Calumet**
Source Address: 2200 169th Street, Hammond, Indiana 46323-2094
Mailing Address: (same)
Permit No.: **MSOP 089-11480-00249**

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Report period
Beginning: _____
Ending: _____

Boiler Affected	Alternate Fuel	Days burning alternate fuel
B & W Boiler (Central Plant)		

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:
Printed Name:
Title/Position:
Date:

A certification by the authorized individual as defined by 326 IAC 2-1.1-1(1) is required for this report.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION
and
HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	**Purdue University Calumet**
Address:	**2200 169th Street**
City:	**Hammond, Indiana 46323-2094**
Phone #:	**(219)989-2973**
MSOP #:	**089-11480-00249**

I hereby certify that Purdue University Calumet is _ still in operation.
_ no longer in operation.

I hereby certify that Purdue University Calumet is
_ in compliance with the requirements of **MSOP 089-11480-00249**.
_ not in compliance with the requirements of **MSOP 089-11480-00249**.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
FAX NUMBER – (317)233-5967
HAMMOND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
FAX NUMBER – (219)853-6343

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY:_____PHONE NO. ( )_____
LOCATION: (CITY AND COUNTY)_____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP:_____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON:_____
_____

DATE/TIME MALFUNCTION STARTED: _____/_____/ 20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 20____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER:_____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

_____

MEASURES TAKEN TO MINIMIZE EMISSIONS:_____

_____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES:_____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS:_____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT:_____
INTERIM CONTROL MEASURES: (IF APPLICABLE)_____
_____
_____

MALFUNCTION REPORTED BY:_____TITLE:_____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY:_____DATE:_____TIME:_____

*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1.This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

_____

_____

Indiana Department of Environmental Management
Office of Air Quality
and
Hammond Department of Environmental Management
-Air Pollution Control Division-

Addendum to the
Technical Support Document for a Minor Source Operating Permit

Source Name:	**Purdue University Calumet**
Source Location:	2200 169th Street, Hammond, Indiana 46323-2094
County:	Lake
SIC Code:	8221 – Educational Services
Operation Permit No.:	**MSOP 089-11480-00249**
Permit Reviewer:	Debra Malone, HDEM

On May 11, 2001, the Hammond Department of Environmental Management (HDEM) had a notice published in the Times, Hammond, Indiana, stating that Purdue University Calumet had applied for a Minor Source Operating Permit to operate steam boilers used for heating the university. The notice also stated that HDEM proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed. No comments were made during this public notice period.

Upon further review, on June 12, 2001, the Indiana Department of Environmental Management – Northwest Office and HDEM decided to make the following revisions to the permit for clarification purposes (bolded language has been added, the language with a line through it has been deleted). The Table Of Contents has also been modified to reflect these changes.

Section C (Source Operation Conditions) of the MSOP

1. On page 8 of 22 (now renumbered page 9 of 23), 326 IAC 4-1 Open Burning, 326 IAC 4-2 Incineration and 326 IAC 6-4 Fugitive Dust Emissions have been included in the MSOP because they are applicable requirements which were previously omitted:

C.9 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

C.10 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2. 326 IAC 9-1-2 is not federally enforceable.

C.11 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

2. On page 8 of 22 (now renumbered page 9 of 23), Condition C.8 Opacity, section (b) the parenthesis has been moved.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute no overlapping integrated averages for a continuous opacity~~)~~ monitor**)** in a six (6) hour period.

3. On page 9 of 22 (now renumbered page 10 of 23), Condition C.10 Performance Testing (now C.13), section (a), last paragraph, the word address has been changed to addresses.

C.13 Performance Testing [326 IAC 3-6]

(a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM-OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Hammond Department of Environmental Management
5925 Calumet Avenue – Room 304
Hammond, Indiana 46320

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address**es** so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM-OAQ and HDEM within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM-OAQ and HDEM, if the source submits to IDEM-OAQ and HDEM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

4. On page 10 of 22, C.14 Malfunctions Report, (now renumbered page 11 of 23, C.17), HDEM has been included in section (a); in section (b) the words "included in this permit" have been added after …using the Malfunction Report Forms (2 pages); and the telephone and facsimile numbers have been added after section (b).

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM)-Office of Air Quality (OAQ)**, the Hammond Department of Environmental Management (HDEM)** or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ and HDEM, using the Malfunction Report Forms (2 pages) **included in this permit**. Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

IDEM-OAQ
Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

HDEM
Telephone Number: 219-853-6306
Facsimile Number: 219-853-6343

5. On page 10 of 22, C.15 Annual Emission Statement, (now renumbered page 12 of 23, C.18), section (a) (2) has been removed.

(a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:

(1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);

~~(2) Indicate actual emissions of other regulated pollutants from the source, for purposes of Part 70 fee assessment.~~

6. On page 16 of 22 (now renumbered page 17 of 23), under Condition D.1.4 Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO) a table has been added to show the local limits for SO2, NOx, VOC and CO.

D.1.4 Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO)

Emissions from the combustion of natural gas and No. 2 fuel oil are governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended) for the following pollutants: Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon

Monoxide (CO).

Pollutant	Local Limit (lbs/hr)	Local Limit (TPY)
SO2	**12.337**	**54.036**
NOx	**5.794**	**25.378**
VOC	**0.319**	**1.396**
CO	**4.867**	**21.318**

7. On page 16 of 22 (now renumbered page 18 of 23), the title of Condition D.1.8 has been underlined for consistency with the rest of the permit.

D.1.8 Sulfur Dioxide Emissions and Sulfur Content

8. On page 18 of 22 (now renumbered page 19 of 23), under Condition D.1.11 Reporting Requirements, section (a), where it reads …"with Conditions D.1.1 through D.1.4, and D.1.10"… the wording has been changed to …"with Condition D.1.10"… because of redundancy (D.1.10 documents compliance with D.1.1 through D.1.4).

D.1.11 Reporting Requirements

(a) A summary of the information to document compliance with Condition ~~s D.1.1 through D.1.4, and~~ D.1.10 shall be submitted to the address(es) listed in Section C – General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, upon request.

9. On page 18 of 22 (now renumbered page 19 of 23), under Condition D.1.11 Reporting Requirements, the words "Natural Gas Fired Boiler Certification" were added before …form provided, in D.1.11 (b). Also another paragraph (c) was added to explain where the certification should be submitted and when.

(b) The permittee shall certify, on the **Natural Gas Fired Boiler Certification** form provided, that natural gas was fired in the boiler at all times during each quarter. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The natural gas boiler certification shall be submitted to the address listed in Section C – General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

Also, on June 20, 2001, the Indiana Department of Environmental Management – Office of Air Quality asked that the following revisions be made to the Technical Support Document (TSD) and permit for further clarification (bolded language has been added, the language with a line through it has been deleted).

Technical Support Document (TSD) of the MSOP

1. On page 7 of 10 of the TSD under 326 IAC 6-2 Particulate Emission Limitations for Sources of Indirect Heating it should state that "each of" the boilers shall be limited to 0.4895 lbs/MMBtu. This should also be shown in the table. 326 IAC 6-2-2(a) does not have a lbs/hr or TPY limit. In

the table the two (2) columns titled 326 IAC 6-2-2(a) Limit (lbs/hr) and (TPY) will now read Equivalent Limit (lbs/hr) and (TPY) to be used for comparison against the stated Local Limit (lbs/hr) and (TPY).

326 IAC 6-2 Particulate Emission Limitations for Sources of Indirect Heating

Pursuant to 326 IAC 6-2-2 (a) (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(b)), **each of** the boilers shall be limited to 0.4895 pounds per million British thermal unit, as shown in the following table:

Boiler	Installation Date	Heat Input Rating (mmBtu/hr)	Emissions Limitation (lb/mmBtu) 326 IAC 6-2-2	~~326 IAC 6-2-2(a)~~ Equivalent Limit (lbs/hr)	~~326 IAC 6-2-2(a)~~ Equivalent Limit (TPY)	Local Limit (lbs/hr)	Local Limit (TPY)
B & W Boiler (Central Plant)	Prior to 1967	25.2	~~0.5192~~ **0.4895**	17.8178	78.0420	0.1878	0.8224
#1 Highlander Boiler	Prior to 1967	5.6	~~0.5027~~ **0.4895**	17.8178	78.0420	0.0417	0.1828
#2 Highlander Boiler	Prior to 1967	5.6	0.4895	17.8178	78.0420	0.0417	0.1828
		Q = 36.4	**Pt = 0.4895**				

This emission limitation was based on the following equation:

$Pt = 0.87 / Q^{0.16}$ **= 0.87 / (36.4^ (0.16))**
= 0.87 / 1.7774
= 0.4895 lb/mmBtu

Where:

Pt = Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input.

Q = Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

Particulate emissions from the combustion of natural gas and no. 2 fuel oil will be governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended). As shown in the table above the local emission limitation will be more stringent than that using 326 IAC 6-2 Particulate Emission Limitations for Sources of Indirect Heating; therefore, the source is in compliance with the rule.

2. On page 8 of 10 of the TSD under 326 IAC 6-2 Particulate Emission Limitations for Sources of Indirect Heating it should state that "each of" the boilers shall be limited to 0.3774 lbs/MMBtu. This should also be shown in the table. 326 IAC 6-2-4(a) does not have a lbs/hr or TPY limit. In the table the two (2) columns titled 326 IAC 6-2-4(a) Limit (lbs/hr) and (TPY) will now read Equivalent Limit (lbs/hr) and (TPY) to be used for comparison against the stated Local Limit (lbs/hr) and (TPY).

326 IAC 6-2 Particulate Emission Limitations for Sources of Indirect Heating

Pursuant to 326 IAC 6-2-4 (a) (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(d)), **each of** the boilers shall be limited to ~~0.4840~~ **0.3774** pounds per million British thermal unit, as shown in the following table:

Boiler	Installation Date	Heat Input Rating (mmBtu/hr)	Emissions Limitation (lb/mmBtu) 326 IAC 6-2-4	~~326 IAC 6-2-4(a)~~ Equivalent Limit (lbs/hr)	~~326 IAC 6-2-4(a)~~ Equivalent Limit (TPY)	Local Limit (lbs/hr)	Local Limit (TPY)
#1F Burnham Boiler (Central Plant)	1997	3.8	~~0.7703~~ **0.3774**	28.6044	125.2873	0.0551	0.2412
#2F Burnham Boiler (Central Plant)	1997	6.3	~~0.5975~~ **0.3774**	28.6044	125.2873	0.0913	0.3999
#3F Burnham Boiler (Central Plant)	1997	6.3	~~0.5267~~ **0.3774**	28.6044	125.2873	0.0913	0.3999
#4F Burnham Boiler (Central Plant)	1997	6.3	~~0.4840~~ **0.3774**	28.6044	125.2873	0.0913	0.3999

Where: Q = 36.4 +22.7 = 59.1 Pt = ~~0.4840~~ 0.3774

The emission limitation was based on the following equation:

$$Pt = 1.09 / Q^{0.26}$$ **= 1.09 / (59.1^(0.26))**
= 1.09 / 2.888
= 0.3774 lb/mmBtu

Where:

Pt = Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input.

Q = Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

Particulate emissions from the combustion of natural gas and no. 2 fuel oil will be governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended). As shown in the table above the local emission limitation will be more stringent than that using 326 IAC 6-2 Particulate Emission Limitations for Sources of Indirect Heating; therefore, the source is in compliance with the rule.

3. On page 9 of 10 of the TSD under Local Rule Applicability, Hammond Air Quality Control Ordinance No. 3522 (as amended), local limits for Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO) have been added in a table as shown below:

Hammond Air Quality Control Ordinance No. 3522 (as amended)

Emissions from the combustion of natural gas and no. 2 fuel oil are governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended) for the following pollutants: Sulfur Dioxide

(SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO). See Appendix A for each boiler's individual pollutant limits.

P ollutant	Local Limit (lbs/hr)	Local Limit (TPY)
Sulfur Dioxide	12.3370	54.0359
Nitrogen Oxide	5.7941	25.3782
Volatile Organic Compound	0.3187	1.3958
Carbon Monoxide	4.8671	21.3177

Minor Source Operating Permit (MSOP)

1. On page 14 of 22 (now renumbered page 15 of 23), under D.1.1 Particulate Matter Limitation (PM), in the first paragraph it should state …particulate emissions from "each facility" instead of from "all facilities" used for indirect heating purposes which were existing and in operation on or before June 8, 1972, shall in no case exceed 0.4895 pounds of particulate matter per million British thermal units heat input,…This should also be shown in the table. 326 IAC 6-2-2(a) does not have a lbs/hr or TPY limit. In the table the two (2) columns titled 326 IAC 6-2-2(a) Limit (lbs/hr) and (TPY) have been deleted.

D.1.1 Particulate Matter Limitation (PM) [326 IAC 6-2-2]

Pursuant to 326 IAC 6-2-2 (a) (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(b)), particulate emissions from ~~all facilities~~ **each facility** used for indirect heating purposes which were existing and in operation on or before June 8, 1972, shall in no case exceed 0.4895 pounds of particulate matter per million British thermal units heat input, as shown in the following table:

Boiler	Installation Date	Heat Input Rating (mmBtu/hr)	Emissions Limitation (lb/mmBtu)	~~326 IAC 6-2-2(a) Limit (lbs/hr)~~	~~326 IAC 6-2-2(a) Limit (TPY)~~
B & W Boiler (Central Plant)	Prior to 1967	25.2	~~0.5192~~ **0.4895**	~~17.8178~~	~~78.0420~~
#1 Highlander Boiler	Prior to 1967	5.6	~~0.5027~~ **0.4895**	~~17.8178~~	~~78.0420~~
#2 Highlander Boiler	Prior to 1967	5.6	0.4895	~~17.8178~~	~~78.0420~~

Q = 36.4 Pt = 0.4895

2. On page 15 of 22 (now renumbered page 16 of 23), under D.1.2 Particulate Matter Limitation (PM), in the first paragraph it should state …particulate emissions from "each facility" instead of from "all facilities" used for indirect heating purposes which were existing and in operation after September 21, 1983, shall in no case exceed 0.3774 not 0.4840 pounds of particulate matter per million British thermal units heat input…This should also be shown in the table. 326 IAC 6-2-4(a) does not have a lbs/hr or TPY limit. In the table the two (2) columns titled 326 IAC 6-2-4(a) Limit (lbs/hr) and (TPY) have been deleted.

D.1.2 Particulate Matter Limitation (PM) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (a) (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(d)), particulate emissions from ~~all facilities~~ **each facility** used for indirect heating purposes which were existing and in operation after September 21, 1983, shall in no case exceed ~~0.4840~~ **0.3774** pounds of particulate matter per million British thermal units heat input, as shown in the following table:

Boiler	Installation Date	Heat Input Rating (mmBtu/hr)	Emissions Limitation (lb/mmBtu)	~~326 IAC 6-2-4(a) Limit (lbs/hr)~~	~~326 IAC 6-2-4(a) Limit (TPY)~~
#1F Burnham Boiler (Central Plant)	1997	3.8	~~0.7703~~ **0.3774**	~~28.6044~~	~~125.2873~~
#2F Burnham Boiler (Central Plant)	1997	6.3	~~0.5975~~ **0.3774**	~~28.6044~~	~~125.2873~~
#3F Burnham Boiler (Central Plant)	1997	6.3	~~0.5267~~ **0.3774**	~~28.6044~~	~~125.2873~~
#4F Burnham Boiler (Central Plant)	1997	6.3	~~0.4840~~ **0.3774**	~~28.6044~~	~~125.2873~~

Q = 59.1 Pt = ~~0.4840~~ 0.3774

3. On page 16 of 22 (now renumbered page 17 of 23), under D.1.4 Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO), local limits for Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO) have been added in a table as shown below:

Hammond Air Quality Control Ordinance No. 3522 (as amended)

Emissions from the combustion of natural gas and no. 2 fuel oil are governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended) for the following pollutants: Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO).

P ollutant	Local Limit (lbs/hr)	Local Limit (TPY)
SO2	**12.3370**	**54.0359**
NOx	**5.7941**	**25.3782**
VOC	**0.3187**	**1.3958**
CO	**4.8671**	**21.3177**

4. On page 16 of 22 (now renumbered page 17 of 23), under D.1.6 Preventive Maintenance Plan, "this emissions unit and any control device" has been changed to "these emissions units and any control device(s)" as shown below:

D.1.6 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for ~~this~~ **these** emissions unit**s** and any control device**(s)**.

5. On page 17 of 22 (now renumbered page 18 of 23), under D.1.9 Visible Emissions Notations, section (a) should read…Once per shift visible emission notations of each of the four (4) Burnham Boilers' stack exhaust shall be performed… not daily.

D.1.9 Visible Emissions Notations

(a) ~~Daily~~ **Once per shift** visible emission notations of each of the four (4) Burnham Boilers' stack exhaust shall be performed during normal daylight operations while combusting No. 2 fuel oil. A trained employee shall record whether emissions are normal or abnormal.

6. On page 18 of 22 (now renumbered page 19 of 23), under D.1.10 Record Keeping Requirements, section (c) should read…the Permittee shall maintain records of once per shift visible emission notations…not daily.

(c) To document compliance with Condition D.1.9, the Permittee shall maintain records of ~~daily~~ **once per shift** visible emission notations of the four (4) Burnham Boilers' stack exhaust while combusting No. 2 fuel oil.

7. On page 18 of 22 (now renumbered page 19 of 23), under D.1.11 Reporting Requirements, section (b) should state that the report requires certification by the "authorized individual " as defined by 326 IAC 2-1.1-1(1) and not by the "responsible official" as defined by 326 IAC 2-7-1(34).

D.1.11 Reporting Requirements

(a) A summary of the information to document compliance with Condition D.1.10 shall be submitted to the address(es) listed in Section C – General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, upon request.

(b) The permittee shall certify, on the Natural Gas Fired Boiler Certification form provided, that natural gas was fired in the boiler at all times during each quarter. The report submitted by the Permittee does require the certification by the "~~responsible official~~ **authorized individual**" as defined by 326 IAC ~~2-7-1(34)~~ **2-1.1-1(1)**.

(c) The natural gas boiler certification shall be submitted to the address listed in Section C – General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

Indiana Department of Environmental Management
Office of Air Quality
and
Hammond Department of Environmental Management
-Air Pollution Control Division-

Addendum to the
Technical Support Document for a Minor Source Operating Permit

Source Name:	**Purdue University Calumet**
Source Location:	2200 169th Street, Hammond, Indiana 46323-2094
County:	Lake
SIC Code:	8221 – Educational Services
Operation Permit No.:	**MSOP 089-11480-00249**
Permit Reviewer:	Debra Malone, HDEM

On May 11, 2001, the Hammond Department of Environmental Management (HDEM) had a notice published in the Times, Hammond, Indiana, stating that Purdue University Calumet had applied for a Minor Source Operating Permit to operate steam boilers used for heating the university. The notice also stated that HDEM proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed. No comments were made during this public notice period.

Upon further review, on June 12, 2001, the Indiana Department of Environmental Management – Northwest Office and HDEM decided to make the following revisions to the permit for clarification purposes (bolded language has been added, the language with a line through it has been deleted). The Table Of Contents has also been modified to reflect these changes.

Section C (Source Operation Conditions) of the MSOP

1. On page 8 of 22 (now renumbered page 9 of 23), 326 IAC 4-1 Open Burning, 326 IAC 4-2 Incineration and 326 IAC 6-4 Fugitive Dust Emissions have been included in the MSOP because they are applicable requirements which were previously omitted:

C.9 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1. 326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.

C.10 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2. 326 IAC 9-1-2 is not federally enforceable.

C.11 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

2. On page 8 of 22 (now renumbered page 9 of 23), Condition C.8 Opacity, section (b) the parenthesis has been moved.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute no overlapping integrated averages for a continuous opacity~~)~~ monitor**)** in a six (6) hour period.

3. On page 9 of 22 (now renumbered page 10 of 23), Condition C.10 Performance Testing (now C.13), section (a), last paragraph, the word address has been changed to addresses.

C.13 Performance Testing [326 IAC 3-6]

(a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM-OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

and

Hammond Department of Environmental Management
5925 Calumet Avenue – Room 304
Hammond, Indiana 46320

no later than thirty-five (35) days prior to the intended test date. The Permittee shall submit a notice of the actual test date to the above address**es** so that it is received at least two weeks prior to the test date.

(b) All test reports must be received by IDEM-OAQ and HDEM within forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM-OAQ and HDEM, if the source submits to IDEM-OAQ and HDEM, a reasonable written explanation within five (5) days prior to the end of the initial forty-five (45) day period.

The documentation submitted by the Permittee does not require certification by the “authorized individual” as defined by 326 IAC 2-1.1-1.

4. On page 10 of 22, C.14 Malfunctions Report, (now renumbered page 11 of 23, C.17), HDEM has been included in section (a); in section (b) the words "included in this permit" have been added after …using the Malfunction Report Forms (2 pages); and the telephone and facsimile numbers have been added after section (b).

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM)-Office of Air Quality (OAQ)**, the Hammond Department of Environmental Management (HDEM)** or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ and HDEM, using the Malfunction Report Forms (2 pages) **included in this permit**. Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

IDEM-OAQ
Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or
Telephone Number: 317-233-5674 (ask for Compliance Section)
Facsimile Number: 317-233-5967

HDEM
Telephone Number: 219-853-6306
Facsimile Number: 219-853-6343

5. On page 10 of 22, C.15 Annual Emission Statement, (now renumbered page 12 of 23, C.18), section (a) (2) has been removed.

(a) The Permittee shall submit an annual emission statement certified pursuant to the requirements of 326 IAC 2-6, that must be received by April 15 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual emission statement shall meet the following requirements:

(1) Indicate actual emissions of criteria pollutants from the source, in compliance with 326 IAC 2-6 (Emission Reporting);

~~(2) Indicate actual emissions of other regulated pollutants from the source, for purposes of Part 70 fee assessment.~~

6. On page 16 of 22 (now renumbered page 17 of 23), under Condition D.1.4 Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO) a table has been added to show the local limits for SO2, NOx, VOC and CO.

D.1.4 Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO)

Emissions from the combustion of natural gas and No. 2 fuel oil are governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended) for the following pollutants: Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon

Monoxide (CO).

Pollutant	Local Limit (lbs/hr)	Local Limit (TPY)
SO2	**12.337**	**54.036**
NOx	**5.794**	**25.378**
VOC	**0.319**	**1.396**
CO	**4.867**	**21.318**

7. On page 16 of 22 (now renumbered page 18 of 23), the title of Condition D.1.8 has been underlined for consistency with the rest of the permit.

D.1.8 Sulfur Dioxide Emissions and Sulfur Content

8. On page 18 of 22 (now renumbered page 19 of 23), under Condition D.1.11 Reporting Requirements, section (a), where it reads …"with Conditions D.1.1 through D.1.4, and D.1.10"… the wording has been changed to …"with Condition D.1.10"… because of redundancy (D.1.10 documents compliance with D.1.1 through D.1.4).

D.1.11 Reporting Requirements

(a) A summary of the information to document compliance with Condition ~~s D.1.1 through D.1.4, and~~ D.1.10 shall be submitted to the address(es) listed in Section C – General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, upon request.

9. On page 18 of 22 (now renumbered page 19 of 23), under Condition D.1.11 Reporting Requirements, the words "Natural Gas Fired Boiler Certification" were added before …form provided, in D.1.11 (b). Also another paragraph (c) was added to explain where the certification should be submitted and when.

(b) The permittee shall certify, on the **Natural Gas Fired Boiler Certification** form provided, that natural gas was fired in the boiler at all times during each quarter. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) The natural gas boiler certification shall be submitted to the address listed in Section C – General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

Also, on June 20, 2001, the Indiana Department of Environmental Management – Office of Air Quality asked that the following revisions be made to the Technical Support Document (TSD) and permit for further clarification (bolded language has been added, the language with a line through it has been deleted).

Technical Support Document (TSD) of the MSOP

1. On page 7 of 10 of the TSD under 326 IAC 6-2 Particulate Emission Limitations for Sources of Indirect Heating it should state that "each of" the boilers shall be limited to 0.4895 lbs/MMBtu. This should also be shown in the table. 326 IAC 6-2-2(a) does not have a lbs/hr or TPY limit. In

the table the two (2) columns titled 326 IAC 6-2-2(a) Limit (lbs/hr) and (TPY) will now read Equivalent Limit (lbs/hr) and (TPY) to be used for comparison against the stated Local Limit (lbs/hr) and (TPY).

326 IAC 6-2 Particulate Emission Limitations for Sources of Indirect Heating

Pursuant to 326 IAC 6-2-2 (a) (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(b)), **each of** the boilers shall be limited to 0.4895 pounds per million British thermal unit, as shown in the following table:

Boiler	Installation Date	Heat Input Rating (mmBtu/hr)	Emissions Limitation (lb/mmBtu) 326 IAC 6-2-2	~~326 IAC 6-2-2(a)~~ Equivalent Limit (lbs/hr)	~~326 IAC 6-2-2(a)~~ Equivalent Limit (TPY)	Local Limit (lbs/hr)	Local Limit (TPY)
B & W Boiler (Central Plant)	Prior to 1967	25.2	~~0.5192~~ **0.4895**	17.8178	78.0420	0.1878	0.8224
#1 Highlander Boiler	Prior to 1967	5.6	~~0.5027~~ **0.4895**	17.8178	78.0420	0.0417	0.1828
#2 Highlander Boiler	Prior to 1967	5.6	0.4895	17.8178	78.0420	0.0417	0.1828
		Q = 36.4	**Pt = 0.4895**				

This emission limitation was based on the following equation:

$Pt = 0.87 / Q^{0.16}$ **= 0.87 / (36.4^ (0.16))**
= 0.87 / 1.7774
= 0.4895 lb/mmBtu

Where:

Pt = Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input.

Q = Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

Particulate emissions from the combustion of natural gas and no. 2 fuel oil will be governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended). As shown in the table above the local emission limitation will be more stringent than that using 326 IAC 6-2 Particulate Emission Limitations for Sources of Indirect Heating; therefore, the source is in compliance with the rule.

2. On page 8 of 10 of the TSD under 326 IAC 6-2 Particulate Emission Limitations for Sources of Indirect Heating it should state that "each of" the boilers shall be limited to 0.3774 lbs/MMBtu. This should also be shown in the table. 326 IAC 6-2-4(a) does not have a lbs/hr or TPY limit. In the table the two (2) columns titled 326 IAC 6-2-4(a) Limit (lbs/hr) and (TPY) will now read Equivalent Limit (lbs/hr) and (TPY) to be used for comparison against the stated Local Limit (lbs/hr) and (TPY).

326 IAC 6-2 Particulate Emission Limitations for Sources of Indirect Heating

Pursuant to 326 IAC 6-2-4 (a) (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(d)), **each of** the boilers shall be limited to ~~0.4840~~ **0.3774** pounds per million British thermal unit, as shown in the following table:

Boiler	Installation Date	Heat Input Rating (mmBtu/hr)	Emissions Limitation (lb/mmBtu) 326 IAC 6-2-4	~~326 IAC 6-2-4(a)~~ Equivalent Limit (lbs/hr)	~~326 IAC 6-2-4(a)~~ Equivalent Limit (TPY)	Local Limit (lbs/hr)	Local Limit (TPY)
#1F Burnham Boiler (Central Plant)	1997	3.8	~~0.7703~~ **0.3774**	28.6044	125.2873	0.0551	0.2412
#2F Burnham Boiler (Central Plant)	1997	6.3	~~0.5975~~ **0.3774**	28.6044	125.2873	0.0913	0.3999
#3F Burnham Boiler (Central Plant)	1997	6.3	~~0.5267~~ **0.3774**	28.6044	125.2873	0.0913	0.3999
#4F Burnham Boiler (Central Plant)	1997	6.3	~~0.4840~~ **0.3774**	28.6044	125.2873	0.0913	0.3999

Where: Q = 36.4 +22.7 = 59.1 Pt = ~~0.4840~~ 0.3774

The emission limitation was based on the following equation:

$$Pt = 1.09 / Q^{0.26}$$ **= 1.09 / (59.1^(0.26))**
= 1.09 / 2.888
= 0.3774 lb/mmBtu

Where:

Pt = Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input.

Q = Total source maximum operating capacity rating in million Btu per hour (mmBtu/hr) heat input. The maximum operating capacity rating is defined as the maximum capacity at which the facility is operated or the nameplate capacity, whichever is specified in the facility's permit application, except when some lower capacity is contained in the facility's operation permit; in which case, the capacity specified in the operation permit shall be used.

Particulate emissions from the combustion of natural gas and no. 2 fuel oil will be governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended). As shown in the table above the local emission limitation will be more stringent than that using 326 IAC 6-2 Particulate Emission Limitations for Sources of Indirect Heating; therefore, the source is in compliance with the rule.

3. On page 9 of 10 of the TSD under Local Rule Applicability, Hammond Air Quality Control Ordinance No. 3522 (as amended), local limits for Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO) have been added in a table as shown below:

Hammond Air Quality Control Ordinance No. 3522 (as amended)

Emissions from the combustion of natural gas and no. 2 fuel oil are governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended) for the following pollutants: Sulfur Dioxide

(SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO). See Appendix A for each boiler's individual pollutant limits.

P ollutant	Local Limit (lbs/hr)	Local Limit (TPY)
Sulfur Dioxide	12.3370	54.0359
Nitrogen Oxide	5.7941	25.3782
Volatile Organic Compound	0.3187	1.3958
Carbon Monoxide	4.8671	21.3177

Minor Source Operating Permit (MSOP)

1. On page 14 of 22 (now renumbered page 15 of 23), under D.1.1 Particulate Matter Limitation (PM), in the first paragraph it should state …particulate emissions from "each facility" instead of from "all facilities" used for indirect heating purposes which were existing and in operation on or before June 8, 1972, shall in no case exceed 0.4895 pounds of particulate matter per million British thermal units heat input,…This should also be shown in the table. 326 IAC 6-2-2(a) does not have a lbs/hr or TPY limit. In the table the two (2) columns titled 326 IAC 6-2-2(a) Limit (lbs/hr) and (TPY) have been deleted.

D.1.1 Particulate Matter Limitation (PM) [326 IAC 6-2-2]

Pursuant to 326 IAC 6-2-2 (a) (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(b)), particulate emissions from ~~all facilities~~ **each facility** used for indirect heating purposes which were existing and in operation on or before June 8, 1972, shall in no case exceed 0.4895 pounds of particulate matter per million British thermal units heat input, as shown in the following table:

Boiler	Installation Date	Heat Input Rating (mmBtu/hr)	Emissions Limitation (lb/mmBtu)	~~326 IAC 6-2-2(a) Limit (lbs/hr)~~	~~326 IAC 6-2-2(a) Limit (TPY)~~
B & W Boiler (Central Plant)	Prior to 1967	25.2	~~0.5192~~ **0.4895**	~~17.8178~~	~~78.0420~~
#1 Highlander Boiler	Prior to 1967	5.6	~~0.5027~~ **0.4895**	~~17.8178~~	~~78.0420~~
#2 Highlander Boiler	Prior to 1967	5.6	0.4895	~~17.8178~~	~~78.0420~~

Q = 36.4 Pt = 0.4895

2. On page 15 of 22 (now renumbered page 16 of 23), under D.1.2 Particulate Matter Limitation (PM), in the first paragraph it should state …particulate emissions from "each facility" instead of from "all facilities" used for indirect heating purposes which were existing and in operation after September 21, 1983, shall in no case exceed 0.3774 not 0.4840 pounds of particulate matter per million British thermal units heat input…This should also be shown in the table. 326 IAC 6-2-4(a) does not have a lbs/hr or TPY limit. In the table the two (2) columns titled 326 IAC 6-2-4(a) Limit (lbs/hr) and (TPY) have been deleted.

D.1.2 Particulate Matter Limitation (PM) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (a) (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(d)), particulate emissions from ~~all facilities~~ **each facility** used for indirect heating purposes which were existing and in operation after September 21, 1983, shall in no case exceed ~~0.4840~~ **0.3774** pounds of particulate matter per million British thermal units heat input, as shown in the following table:

Boiler	Installation Date	Heat Input Rating (mmBtu/hr)	Emissions Limitation (lb/mmBtu)	~~326 IAC 6-2-4(a) Limit (lbs/hr)~~	~~326 IAC 6-2-4(a) Limit (TPY)~~
#1F Burnham Boiler (Central Plant)	1997	3.8	~~0.7703~~ **0.3774**	~~28.6044~~	~~125.2873~~
#2F Burnham Boiler (Central Plant)	1997	6.3	~~0.5975~~ **0.3774**	~~28.6044~~	~~125.2873~~
#3F Burnham Boiler (Central Plant)	1997	6.3	~~0.5267~~ **0.3774**	~~28.6044~~	~~125.2873~~
#4F Burnham Boiler (Central Plant)	1997	6.3	~~0.4840~~ **0.3774**	~~28.6044~~	~~125.2873~~

Q = 59.1 Pt = ~~0.4840~~ 0.3774

3. On page 16 of 22 (now renumbered page 17 of 23), under D.1.4 Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO), local limits for Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO) have been added in a table as shown below:

Hammond Air Quality Control Ordinance No. 3522 (as amended)

Emissions from the combustion of natural gas and no. 2 fuel oil are governed by the Hammond Air Quality Control Ordinance No. 3522 (as amended) for the following pollutants: Sulfur Dioxide (SO2), Nitrogen Oxide (NOx), Volatile Organic Compound (VOC), and Carbon Monoxide (CO).

P ollutant	Local Limit (lbs/hr)	Local Limit (TPY)
SO2	**12.3370**	**54.0359**
NOx	**5.7941**	**25.3782**
VOC	**0.3187**	**1.3958**
CO	**4.8671**	**21.3177**

4. On page 16 of 22 (now renumbered page 17 of 23), under D.1.6 Preventive Maintenance Plan, "this emissions unit and any control device" has been changed to "these emissions units and any control device(s)" as shown below:

D.1.6 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section C - Preventive Maintenance Plan, of this permit, is required for ~~this~~ **these** emissions unit**s** and any control device**(s)**.

5. On page 17 of 22 (now renumbered page 18 of 23), under D.1.9 Visible Emissions Notations, section (a) should read…Once per shift visible emission notations of each of the four (4) Burnham Boilers' stack exhaust shall be performed… not daily.

D.1.9 Visible Emissions Notations

(a) ~~Daily~~ **Once per shift** visible emission notations of each of the four (4) Burnham Boilers' stack exhaust shall be performed during normal daylight operations while combusting No. 2 fuel oil. A trained employee shall record whether emissions are normal or abnormal.

6. On page 18 of 22 (now renumbered page 19 of 23), under D.1.10 Record Keeping Requirements, section (c) should read…the Permittee shall maintain records of once per shift visible emission notations…not daily.

(c) To document compliance with Condition D.1.9, the Permittee shall maintain records of ~~daily~~ **once per shift** visible emission notations of the four (4) Burnham Boilers' stack exhaust while combusting No. 2 fuel oil.

7. On page 18 of 22 (now renumbered page 19 of 23), under D.1.11 Reporting Requirements, section (b) should state that the report requires certification by the "authorized individual " as defined by 326 IAC 2-1.1-1(1) and not by the "responsible official" as defined by 326 IAC 2-7-1(34).

D.1.11 Reporting Requirements

(a) A summary of the information to document compliance with Condition D.1.10 shall be submitted to the address(es) listed in Section C – General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, upon request.

(b) The permittee shall certify, on the Natural Gas Fired Boiler Certification form provided, that natural gas was fired in the boiler at all times during each quarter. The report submitted by the Permittee does require the certification by the "~~responsible official~~ **authorized individual**" as defined by 326 IAC ~~2-7-1(34)~~ **2-1.1-1(1)**.

(c) The natural gas boiler certification shall be submitted to the address listed in Section C – General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported.

Appendix A

Purdue University Calumet
169th & Wicker Avenue
Hammond, Indiana 46323-2094

PLANT ID NO: 00249
INSP DATE: 3/23/00
CALC DATE: 6/21/00

CALCULATIONS BY: Kristina Hansen
Debra Malone (Modified 3/19/01)

YEAR OF DATA: **MSOP/1999**

NO. OF POINTS: 7

NOTES
EF: EMISSION FACTOR
CE: CONTROL EFFICIENCY
MDR: MAXIMUM DESIGN RATE
MDC: MAXIMUM DESIGN CAPACITY
Ts: STACK DISCHARGE TEMPERATURE
UNITS FOR EMISSIONS ARE IN (TPY) EXCEPT WHERE GIVEN

****

#1E BOILER
(Central Plant)
(Stack S-1)
CNTRL DEV: None

MDC (mmBtu/hr): 25.2
MDR (mmcft/hr): 0.0247
HEAT CONTENT (Btu/cft): 1,020
QTY BURNED (mmcft/yr): 0.00
STACK ID (DIAM:HEIGHT): (7 : 35)
FLOWRATE (ACFM): 568
Ts(°F): 330

PERMITTED OPERATING HRS: **8760** hr/yr

			POTENTIAL EMISSIONS						**ALLOWABLE**		**COMPANY ACTUAL**	
	AP-42		BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	7.6	0	0.1878	4.5064	**0.8224**	0.1878	0.8224	0.0575	0.1878	0.8224	0.0000	0.0000
PM10	7.6	0	0.1878	4.5064	**0.8224**	0.1878	0.8224	0.0575	0.1878	0.8224	0.0000	0.0000
SOx	0.6	0	0.0148	0.3558	**0.0649**	0.0148	0.0649	N/A	0.0148	0.0649	0.0000	0.0000
NOx	100	0	2.4706	59.2941	**10.8212**	2.4706	10.8212	N/A	2.4706	10.8212	0.0000	0.0000
VOC	5.5	0	0.1359	3.2612	**0.5952**	0.1359	0.5952	N/A	0.1359	0.5952	0.0000	0.0000
CO	84	0	2.0753	49.8071	**9.0898**	2.0753	9.0898	N/A	2.0753	9.0898	0.0000	0.0000
LEAD	0.0005	0	0.0000	0.0003	**0.0001**	0.0000	0.0001	N/A	0.0000	0.0001	0.0000	0.0000

*Natural Gas Fired
**Calculations made using emission factors from AP-42, Table 1.4-1, Table 1.4-2, and 1.4-3.
SCC No. 1-02-006-02
Hammond Air Quality Control Ordinance No. 3522 (as amended)

****

#1F BOILER MDC (mmBtu/hr): 3.8 HEAT CONTENT (Btu/cft): 1,020 STACK ID (DIAM:HEIGHT): (7' : 35')
(Central Plant) MDR (mmcft/hr): 0.0037 QTY BURNED (mmcft/yr): 7 FLOWRATE (ACFM): 215
(Stack S-3) Ts(°F): 350
CNTRL DEV: None PERMITTED OPERATING HRS: **8760** hr/yr

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
	AP-42		BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	7.6	0	0.0283	0.6795	**0.1240**	0.0283	0.1240	0.0235	0.0283	0.1240	0.0266	0.0266
PM10	7.6	0	0.0283	0.6795	**0.1240**	0.0283	0.1240	0.0235	0.0283	0.1240	0.0266	0.0266
SOx	0.6	0	0.0022	0.0536	**0.0098**	0.0022	0.0098	N/A	0.0022	0.0098	0.0021	0.0021
NOx	100	0	0.3725	8.9412	**1.6318**	0.3725	1.6318	N/A	0.3725	1.6318	0.3500	0.3500
VOC	5.5	0	0.0205	0.4918	**0.0897**	0.0205	0.0897	N/A	0.0205	0.0897	0.0193	0.0193
CO	84	0	0.3129	7.5106	**1.3707**	0.3129	1.3707	N/A	0.3129	1.3707	0.2940	0.2940
LEAD	0.0005	0	0.0000	0.0000	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000	0.0000	0.0000

*Natural Gas Fired Hammond Air Quality Control Ordinance No. 3522 (as amended)
**Calculations made using emission factors from AP-42, Table 1.4-1, Table 1.4-2, and 1.4-3.
SCC No. 1-03-006-03

#1F BOILER MDC (mmBtu/hr): 3.8 HEAT CONTENT (Btu/gal): 138,000 STACK ID (DIAM:HEIGHT): (7' : 35')
(Central Plant) MDR (mgal/hr): 0.0275 ASH CONTENT (%): N/A FLOWRATE (ACFM): 215
(Stack S-3) QTY BURNED (mgal/yr): 0 SULFUR CONTENT (%): 0.5 Ts(°F): 350
CNTRL DEV: None

PERMITTED OPERATING HRS: **8760** hr/yr

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
	AP-42		BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	EF(lbs/mgal)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	2	0	0.0551	1.3217	**0.2412**	0.0551	0.2412	0.0457	0.0551	0.2412	0.0000	0.0000
PM10	1.08	0	0.0297	0.7137	**0.1303**	0.0297	0.1303	0.0247	0.0297	0.1303	0.0000	0.0000
SOx	75	0	2.0652	49.5652	**9.0457**	2.0652	9.0457	N/A	2.0652	9.0457	0.0000	0.0000
NOx	20	0	0.5507	13.2174	**2.4122**	0.5507	2.4122	N/A	0.5507	2.4122	0.0000	0.0000
VOC	0.252	0	0.0069	0.1665	**0.0304**	0.0069	0.0304	N/A	0.0069	0.0304	0.0000	0.0000
CO	5	0	0.1377	3.3043	**0.6030**	0.1377	0.6030	N/A	0.1377	0.6030	0.0000	0.0000
LEAD	0.0004	0	0.0000	0.0003	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000	0.0000	0.0000

*No. 2 Fuel Oil Combustion Hammond Air Quality Control Ordinance No. 3522 (as amended)
**Calculations made using emission factors from AP-42, Table 1.3-2, 1.3-4, and 1.3-8; SCC No. 1-03-005-03
Table 1.3-2 SO2, NOx, & CO; Table 1.3-4 VOC; Table 1.3-8 PM10 & PM; SCC No. 1-03-005-02 Lead.
Per Company's request, 150S was used for SOx instead of 142S.

****

#2F BOILER MDC (mmBtu/hr): 6.3 HEAT CONTENT (Btu/cft): 1,020 STACK ID (DIAM:HEIGHT): (7' : 35')
(Central Plant) MDR (mmcft/hr): 0.0062 QTY BURNED (mmcft/yr): 17 FLOWRATE (ACFM): 215
(Stack S-3) Ts(°F): 350
CNTRL DEV: None PERMITTED OPERATING HRS: **8760** hr/yr

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
	AP-42		BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	7.6	0	0.0469	1.1266	**0.2056**	0.0469	0.2056	0.0389	0.0469	0.2056	0.0646	0.0646
PM10	7.6	0	0.0469	1.1266	**0.2056**	0.0469	0.2056	0.0389	0.0469	0.2056	0.0646	0.0646
SOx	0.6	0	0.0037	0.0889	**0.0162**	0.0037	0.0162	N/A	0.0037	0.0162	0.0051	0.0051
NOx	100	0	0.6176	14.8235	**2.7053**	0.6176	2.7053	N/A	0.6176	2.7053	0.8500	0.8500
VOC	5.5	0	0.0340	0.8153	**0.1488**	0.0340	0.1488	N/A	0.0340	0.1488	0.0468	0.0468
CO	84	0	0.5188	12.4518	**2.2724**	0.5188	2.2724	N/A	0.5188	2.2724	0.7140	0.7140
LEAD	0.0005	0	0.0000	0.0001	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000	0.0000	0.0000

*Natural Gas Fired Hammond Air Quality Control Ordinance No. 3522 (as amended)
**Calculations made using emission factors from AP-42, Table 1.4-1, Table 1.4-2, and 1.4-3.
SCC No. 1-03-006-03

#2F BOILER MDC (mmBtu/hr): 6.3 HEAT CONTENT (Btu/gal): 138,000 STACK ID (DIAM:HEIGHT): (7' : 35')
(Central Plant) MDR (mgal/hr): 0.0457 ASH CONTENT (%): N/A FLOWRATE (ACFM): 215
(Stack S-3) QTY BURNED (mgal/yr): 0 SULFUR CONTENT (%): 0.5 Ts(°F): 350
CNTRL DEV: None PERMITTED OPERATING HRS: **8760** hr/yr

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
	AP-42		BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	EF(lbs/mgal)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	2	0	0.0913	2.1913	**0.3999**	0.0913	0.3999	0.0757	0.0913	0.3999	0.0000	0.0000
PM10	1.08	0	0.0493	1.1833	**0.2160**	0.0493	0.2160	0.0409	0.0493	0.2160	0.0000	0.0000
SOx	75	0	3.4239	82.1739	**14.9967**	3.4239	14.9967	N/A	3.4239	14.9967	0.0000	0.0000
NOx	20	0	0.9130	21.9130	**3.9991**	0.9130	3.9991	N/A	0.9130	3.9991	0.0000	0.0000
VOC	0.252	0	0.0115	0.2761	**0.0504**	0.0115	0.0504	N/A	0.0115	0.0504	0.0000	0.0000
CO	5	0	0.2283	5.4783	**0.9998**	0.2283	0.9998	N/A	0.2283	0.9998	0.0000	0.0000
LEAD	0.0004	0	0.0000	0.0004	**0.0001**	0.0000	0.0001	N/A	0.0000	0.0001	0.0000	0.0000

*No. 2 Fuel Oil Combustion Hammond Air Quality Control Ordinance No. 3522 (as amended)
**Calculations made using emission factors from AP-42, Table 1.3-2, 1.3-4, and 1.3-8; SCC No. 1-03-005-03
Table 1.3-2 SO2, NOx, & CO; Table 1.3-4 VOC; Table 1.3-8 PM10 & PM; SCC No. 1-03-005-02 Lead.
Per Company's request, 150S was used for SOx instead of 142S.

****

#3F BOILER MDC (mmBtu/hr): 6.3 HEAT CONTENT (Btu/cft): 1,020 STACK ID (DIAM:HEIGHT): (7' : 35')

(Central Plant) MDR (mmcft/hr): 0.0062 QTY BURNED (mmcft/yr): 17 FLOWRATE (ACFM): 625

(Stack S-2) Ts(°F): 425

CNTRL DEV: NONE PERMITTED OPERATING HRS: **8760** hr/yr

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
	AP-42		BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	7.6	0	0.0469	1.1266	**0.2056**	0.0469	0.2056	0.0146	0.0469	0.2056	0.0646	0.0646
PM10	7.6	0	0.0469	1.1266	**0.2056**	0.0469	0.2056	0.0146	0.0469	0.2056	0.0646	0.0646
SOx	0.6	0	0.0037	0.0889	**0.0162**	0.0037	0.0162	N/A	0.0037	0.0162	0.0051	0.0051
NOx	100	0	0.6176	14.8235	**2.7053**	0.6176	2.7053	N/A	0.6176	2.7053	0.8500	0.8500
VOC	5.5	0	0.0340	0.8153	**0.1488**	0.0340	0.1488	N/A	0.0340	0.1488	0.0468	0.0468
CO	84	0	0.5188	12.4518	**2.2724**	0.5188	2.2724	N/A	0.5188	2.2724	0.7140	0.7140
LEAD	0.0005	0	0.0000	0.0001	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000	0.0000	0.0000

*Natural Gas Fired Hammond Air Quality Control Ordinance No. 3522 (as amended)

**Calculations made using emission factors from AP-42, Table 1.4-1, Table 1.4-2, and 1.4-3.
SCC No. 1-03-006-03

#3F BOILER MDC (mmBtu/hr): 6.3 HEAT CONTENT (Btu/gal): 138,000 STACK ID (DIAM:HEIGHT): (7' : 35')

(Central Plant) MDR (mgal/hr): 0.0457 ASH CONTENT (%): N/A FLOWRATE (ACFM): 625

(Stack S-2) QTY BURNED (mgal/yr): 0 SULFUR CONTENT (%): 0.5 Ts(°F): 425

CNTRL DEV: None

PERMITTED OPERATING HRS: **8760** hr/yr

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
	AP-42		BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	EF(lbs/mgal)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	2	0	0.0913	2.1913	**0.3999**	0.0913	0.3999	0.0285	0.0913	0.3999	0.0000	0.0000
PM10	1.08	0	0.0493	1.1833	**0.2160**	0.0493	0.2160	0.0154	0.0493	0.2160	0.0000	0.0000
SOx	75	0	3.4239	82.1739	**14.9967**	3.4239	14.9967	N/A	3.4239	14.9967	0.0000	0.0000
NOx	20	0	0.9130	21.9130	**3.9991**	0.9130	3.9991	N/A	0.9130	3.9991	0.0000	0.0000
VOC	0.252	0	0.0115	0.2761	**0.0504**	0.0115	0.0504	N/A	0.0115	0.0504	0.0000	0.0000
CO	5	0	0.2283	5.4783	**0.9998**	0.2283	0.9998	N/A	0.2283	0.9998	0.0000	0.0000
LEAD	0.0004	0	0.0000	0.0004	**0.0001**	0.0000	0.0001	N/A	0.0000	0.0001	0.0000	0.0000

*No. 2 Fuel Oil Combustion Hammond Air Quality Control Ordinance No. 3522 (as amended)

**Calculations made using emission factors from AP-42, Table 1.3-2, 1.3-4, and 1.3-8; SCC No. 1-03-005-03
Table 1.3-2 SO2, NOx, & CO; Table 1.3-4 VOC; Table 1.3-8 PM10 & PM; SCC No. 1-03-005-02 Lead.
Per Company's request, 150S was used for SOx instead of 142S.

****

#4F BOILER MDC (mmBtu/hr): 6.3 HEAT CONTENT (Btu/cft): 1,020 STACK ID (DIAM:HEIGHT): (7' : 35')
(Central Plant) MDR (mmcft/hr): 0.0062 QTY BURNED (mmcft/yr): 18 FLOWRATE (ACFM): 625
(Stack S-2) Ts(°F): 425
CNTRL DEV: None PERMITTED OPERATING HRS: **8760** hr/yr

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
AP-42			BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	7.6	0	0.0469	1.1266	**0.2056**	0.0469	0.2056	0.0146	0.0469	0.2056	0.0684	0.0684
PM10	7.6	0	0.0469	1.1266	**0.2056**	0.0469	0.2056	0.0146	0.0469	0.2056	0.0684	0.0684
SOx	0.6	0	0.0037	0.0889	**0.0162**	0.0037	0.0162	N/A	0.0037	0.0162	0.0054	0.0054
NOx	100	0	0.6176	14.8235	**2.7053**	0.6176	2.7053	N/A	0.6176	2.7053	0.9000	0.9000
VOC	5.5	0	0.0340	0.8153	**0.1488**	0.0340	0.1488	N/A	0.0340	0.1488	0.0495	0.0495
CO	84	0	0.5188	12.4518	**2.2724**	0.5188	2.2724	N/A	0.5188	2.2724	0.7560	0.7560
LEAD	0.0005	0	0.0000	0.0001	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000	0.0000	0.0000

*Natural Gas Fired Hammond Air Quality Control Ordinance No. 3522 (as amended)
**Calculations made using emission factors from AP-42, Table 1.4-1, Table 1.4-2, and 1.4-3.
SCC No. 1-03-006-03

#4F BOILER MDC (mmBtu/hr): 6.3 HEAT CONTENT (Btu/gal): 138,000 STACK ID (DIAM:HEIGHT): (7' : 35')
(Central Plant) MDR (mgal/hr): 0.0457 ASH CONTENT (%): N/A FLOWRATE (ACFM): 625
(Stack S-2) QTY BURNED (mgal/yr): 0 SULFUR CONTENT (%): 0.5 Ts(°F): 425
CNTRL DEV: None PERMITTED OPERATING HRS: **8760** hr/yr

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
AP-42			BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	EF(lbs/mgal)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	2	0	0.0913	2.1913	**0.3999**	0.0913	0.3999	0.0285	0.0913	0.3999	0.0000	0.0000
PM10	1.08	0	0.0493	1.1833	**0.2160**	0.0493	0.2160	0.0154	0.0493	0.2160	0.0000	0.0000
SOx	75	0	3.4239	82.1739	**14.9967**	3.4239	14.9967	N/A	3.4239	14.9967	0.0000	0.0000
NOx	20	0	0.9130	21.9130	**3.9991**	0.9130	3.9991	N/A	0.9130	3.9991	0.0000	0.0000
VOC	0.252	0	0.0115	0.2761	**0.0504**	0.0115	0.0504	N/A	0.0115	0.0504	0.0000	0.0000
CO	5	0	0.2283	5.4783	**0.9998**	0.2283	0.9998	N/A	0.2283	0.9998	0.0000	0.0000
LEAD	0.0004	0	0.0000	0.0004	**0.0001**	0.0000	0.0001	N/A	0.0000	0.0001	0.0000	0.0000

*Natural Gas Fired Hammond Air Quality Control Ordinance No. 3522 (as amended)
**Calculations made using emission factors from AP-42, Table 1.3-2, 1.3-4, and 1.3-8; SCC No. 1-03-005-03
Table 1.3-2 SO2, NOx, & CO; Table 1.3-4 VOC; Table 1.3-8 PM10 & PM; SCC No. 1-03-005-02 Lead.
Per Company's request, 150S was used for SOx instead of 142S.

#1 HIGHLANDER BOILER MDC (mmBtu/hr): 5.6 HEAT CONTENT (Btu/cft): 1,020 STACK ID (DIAM:HEIGHT): (2 : 35)
(K-Bldg.) MDR (mmcft/hr): 0.0055 QTY BURNED (mmcft/yr): 2 FLOWRATE (ACFM): 215
(Stack S-4) Ts(°F): 400
CNTRL DEV: None PERMITTED OPERATING HRS: **8760** hr/yr

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
	AP-42		BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	7.6	0	0.0417	1.0014	**0.1828**	0.0417	0.1828	0.0367	0.0417	0.1828	0.0076	0.0076
PM10	7.6	0	0.0417	1.0014	**0.1828**	0.0417	0.1828	0.0367	0.0417	0.1828	0.0076	0.0076
SOx	0.6	0	0.0033	0.0791	**0.0144**	0.0033	0.0144	N/A	0.0033	0.0144	0.0006	0.0006
NOx	100	0	0.5490	13.1765	**2.4047**	0.5490	2.4047	N/A	0.5490	2.4047	0.1000	0.1000
VOC	5.5	0	0.0302	0.7247	**0.1323**	0.0302	0.1323	N/A	0.0302	0.1323	0.0055	0.0055
CO	84	0	0.4612	11.0682	**2.0200**	0.4612	2.0200	N/A	0.4612	2.0200	0.0840	0.0840
LEAD	0.0005	0	0.0000	0.0001	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000	0.0000	0.0000

*Natural Gas Fired Hammond Air Quality Control Ordinance No. 3522 (as amended)
**Calculations made using emission factors from AP-42, Table 1.4-1, Table 1.4-2, and 1.4-3.
SCC No. 1-03-006-03

#2 HIGHLANDER BOILER MDC (mmBtu/hr): 5.6 HEAT CONTENT (Btu/cft): 1,020 STACK ID (DIAM:HEIGHT): (2 : 35)
(K-Bldg.) MDR (mmcft/hr): 0.0055 QTY BURNED (mmcft/yr): 2 FLOWRATE (ACFM): 215
(Stack S-5) Ts(°F): 400
CNTRL DEV: NONE PERMITTED OPERATING HRS: **8760** hr/yr

			POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
	AP-42		BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	EF(lbs/mmcft)	CE (%)	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	7.6	0	0.0417	1.0014	**0.1828**	0.0417	0.1828	0.0367	0.0417	0.1828	0.0076	0.0076
PM10	7.6	0	0.0417	1.0014	**0.1828**	0.0417	0.1828	0.0367	0.0417	0.1828	0.0076	0.0076
SOx	0.6	0	0.0033	0.0791	**0.0144**	0.0033	0.0144	N/A	0.0033	0.0144	0.0006	0.0006
NOx	100	0	0.5490	13.1765	**2.4047**	0.5490	2.4047	N/A	0.5490	2.4047	0.1000	0.1000
VOC	5.5	0	0.0302	0.7247	**0.1323**	0.0302	0.1323	N/A	0.0302	0.1323	0.0055	0.0055
CO	84	0	0.4612	11.0682	**2.0200**	0.4612	2.0200	N/A	0.4612	2.0200	0.0840	0.0840
LEAD	0.0005	0	0.0000	0.0001	**0.0000**	0.0000	0.0000	N/A	0.0000	0.0000	0.0000	0.0000

*Natural Gas Fired Hammond Air Quality Control Ordinance No. 3522 (as amended)
**Calculations made using emission factors from AP-42, Table 1.4-1, Table 1.4-2, and 1.4-3.
SCC No. 1-03-006-03

Source Totals: (Natural Gas)

	POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
	BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	0.4404	10.5685	1.9287	0.4404	1.9287	0.2226	0.4404	1.9287	0.2394	0.2394
PM10	0.4404	10.5685	1.9287	0.4404	1.9287	0.2226	0.4404	1.9287	0.2394	0.2394
SOx	0.0348	0.8344	0.1523	0.0348	0.1523	#VALUE!	0.0348	0.1523	0.0189	0.0189
NOx	5.7941	139.0588	25.3782	5.7941	25.3782	#VALUE!	5.7941	25.3782	3.1500	3.1500
VOC	0.3187	7.6482	1.3958	0.3187	1.3958	#VALUE!	0.3187	1.3958	0.1733	0.1733
CO	4.8671	116.8094	21.3177	4.8671	21.3177	#VALUE!	4.8671	21.3177	2.6460	2.6460
LEAD	0.0000	0.0007	0.0001	0.0000	0.0001	#VALUE!	0.0000	0.0001	0.0000	0.0000

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Source Totals: (No. 2 Fuel Oil)

	POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
	BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	0.3290	7.8957	1.4410	0.3290	1.4410	0.1783	0.3290	1.4410	0.0000	0.0000
PM10	0.1777	4.2637	0.7781	0.1777	0.7781	0.0963	0.1777	0.7781	0.0000	0.0000
SOx	12.3370	296.0870	54.0359	12.3370	54.0359	#VALUE!	12.3370	54.0359	0.0000	0.0000
NOx	3.2899	78.9565	14.4096	3.2899	14.4096	#VALUE!	3.2899	14.4096	0.0000	0.0000
VOC	0.0415	0.9949	0.1816	0.0415	0.1816	#VALUE!	0.0415	0.1816	0.0000	0.0000
CO	0.8225	19.7391	3.6024	0.8225	3.6024	#VALUE!	0.8225	3.6024	0.0000	0.0000
LEAD	0.0001	0.0016	0.0003	0.0001	0.0003	#VALUE!	0.0001	0.0003	0.0000	0.0000

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Source Totals:

	POTENTIAL EMISSIONS						ALLOWABLE		COMPANY ACTUAL	
	BEFORE CONTROLS			AFTER CONTROLS					BEFORE	AFTER
POLLUTANT	(lbs/hr)	(lbs/day)	**(TPY)**	(lbs/hr)	(TPY)	(gr/dscf)	(lbs/hr)	(TPY)	CONTROLS	CONTROLS
PM	0.7693	18.4641	3.3697	0.7693	3.3697	0.4009	0.4404	1.9287	0.2394	0.2394
PM10	0.6180	14.8321	2.7069	0.6180	2.7069	0.3189	0.4404	1.9287	0.2394	0.2394
SOx	12.3717	296.9213	54.1881	12.3717	54.1881	#VALUE!	12.3370	54.0359	0.0189	0.0189
NOx	9.0840	218.0153	39.7878	9.0840	39.7878	#VALUE!	5.7941	25.3782	3.1500	3.1500
VOC	0.3601	8.6431	1.5774	0.3601	1.5774	#VALUE!	0.3187	1.3958	0.1733	0.1733
CO	5.6895	136.5485	24.9201	5.6895	24.9201	#VALUE!	4.8671	21.3177	2.6460	2.6460
LEAD	0.0001	0.0023	0.0004	0.0001	0.0004	#VALUE!	0.0001	0.0003	0.0000	0.0000

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